

## COOKING UTENSILS BASED ON MEAL PATTERNS \*

### MEAL PATTERNS OF FAMILIES

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(From data on meal patterns and utensils needed in preparing the meals, a minimum and a more desirable set of kitchen utensils for farm families have been developed. The project was a co-operative one carried out by the Bureau of Human Nutrition and Home Economics and experiment stations in three states -- California, Nebraska, and Rhode Island. Data on meal patterns were collected in the spring of 1946 under the direction of Dr. Warren, assistant home economist at the California Experiment Station; Mr. Baragar, associate home economist of the Nebraska Experiment Station; and Mrs. Kuschke, assistant research professor at Rhode Island State College. Based on these meal patterns, the Bureau then made up kitchen utensil test kits; the three state home economists gathered and analyzed data on their use; and Miss Woolrich, housing specialist of the BHNHE, using their reports, determined the items of a minimum and a more desirable set of kitchen utensils.

Dr. Phipard and Miss Fincher, food economists of the BHNHE, here describe meal patterns obtained from the data. Miss Woolrich, Mrs. Kuschke, Mr. Baragar, and Dr. Warren, tell about the development of the two sets of kitchen utensils.)

Education to improve diets should be based on a knowledge of the kinds and quantities of foods families use and also on the way these foods are combined in meals. In the 3-state, co-operative study by the Bureau and the experiment stations of California, Nebraska, and Rhode Island, some important facts on meal patterns were obtained. No data were secured on quantities of food consumed. With so much emphasis on preparation, it is possible that there was some under-reporting of the frequency of serving such items as bread and milk, which need no preparation and often are taken for granted.

When interviewed, each homemaker gave information about the last six meals prepared. A total of 3,845 meals were reported for 645 families: 1,377 breakfasts, 1,209 noon meals, and 1,259 evening meals. More breakfasts were reported because more noon and evening meals were eaten away from home. No families were visited on Saturday and Sunday; thus fewer meals for Friday, Saturday, and Sunday were reported than for other days of the week.

Breakfasts. Substantial breakfasts were usual in three-fourths or more of these farm households. There is no general agreement as to what constitutes light and heavy meals because much depends on the quantity and kind of food as well as on the number of items. Hence, an arbitrary classification for breakfasts was set up, as follows:

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- Light: (1) Fruit or coffee only, and (2) bread and/or cereal, beverage, fruit or no fruit.
- Medium: Eggs, cereal or griddle cakes or bacon or other meat or fish, bread, beverage, fruit or no fruit.
- Heavy: Cereal, eggs, griddle cakes or meat or fish or potatoes or baked beans (or any two of these), bread, beverage, fruit or no fruit.

The percentage of breakfasts considered light, medium, or heavy in the three states that were studied is as follows:

State	: Number of : Breakfasts : Reported	Per Cent of Breakfasts That were:			
		Light	Medium	Heavy	
California. . .	: 453	: 17	: 54	: 29	:
Nebraska. . . .	: 438	: 19	: 50	: 31	:
Rhode Island. .	: 486	: 28	: 53	: 19	:

Foods most commonly served were cereal, eggs, bread of some kind, and coffee. Fruit, fruit juice or tomato juice, and bacon, sausage, ham, or other meat or fish were next often reported. Potatoes or other vegetables such as baked beans appeared in fewer than 10 per cent of the breakfasts.

Differences among states included more cereal eaten by Nebraska families and more eggs and meat by California families. Fruit or tomato juice appeared somewhat more often in breakfast menus of Rhode Island families than of those in the other two states.

Noon and evening meals. Because the pattern of these two meals was similar they are discussed together. Meals were classified as light, medium, or heavy on the basis of the number of foods served. In general, those considered light were: (1) sandwich or soup, with beverage, with or without dessert, (2) one or two vegetables and/or salad and beverage, and (3) other combinations of two or three of these items. Medium-type meals were those containing meat, poultry, fish, cheese or eggs as the main dish, with from 0 to 3 kinds of vegetables or salad, a dessert, and beverage. So-called heavy-type meals were those with meat, poultry, or fish and from 2 to 4 kinds of vegetables, including salad, a dessert, and beverage.

The percentage of noon and evening meals considered light, medium, and heavy in the three states is as follows:

State	: Number of :	Per Cent of Meals That Were:			
	: Meals :	Light	: Medium	: Heavy	:
	: Reported :	:	:	:	:
: Noon Meals					
California. . . :	329	: 33	: 28	: 39	:
Nebraska. . . . :	405	: 14	: 14	: 72	:
Rhode Island. . . :	475	: 39	: 21	: 40	:
: Evening Meals					
California. . . . :	388	: 9	: 22	: 69	:
Nebraska. . . . . :	399	: 17	: 28	: 55	:
Rhode Island. . . :	472	: 20	: 22	: 58	:



It is interesting to note that noon meals in Nebraska were more likely to be of the type described as heavy than were those in California or Rhode Island. There was some evidence that families tended to have their heaviest meal at night if children or adults in the family were away from home at noon. Many families served a fairly heavy meal at both noon and evening, and a few served heavy meals one day and rather light ones the following day.

Light meals, whether at morning, noon, or night, were reported more often in Rhode Island than in the other two states. This practice may be related to the age and activity of family members. More than a fifth of the homemakers in the Rhode Island families were more than 60 years of age, as compared to 11 per cent in Nebraska and 7 per cent in California.

Foods most popular for both noon and evening meals were meat, potatoes, vegetables and dessert. Beef and pork were eaten most often, and lamb the least. More chicken was reported by families interviewed late in the spring than by those visited earlier. Desserts seemed an important part of the meal in all three states. Favorites were cake, pie, and other pastries, cookies, and fruit. Ice cream was in the menus of very few families, most of whom were in the high economic group. Undoubtedly more ice cream would have been reported had the study been made in summer.

Regional differences. A few regional differences were observed. Potatoes were served most often in Nebraska meals. Cornbread, as the traditional Johnny cake, appeared often in Rhode Island meals but seldom in the other two states. Lamb was included in meals served by 21 per cent of the California families, by 12 per cent of those in Rhode Island, and by no families in Nebraska. Fish and other sea food (fresh and canned) was served during the six meals to 27 per cent of the families in California, 30 per cent of those in Rhode Island, and 9 per cent of those in Nebraska.

California families served more fresh fruit and vegetables and used more fruit in salads than those in other states. This was partly a matter of climate and season; families interviewed later in the spring used more of these foods as they became available. However, such foods as artichokes and avocados, which appeared in many of the California menus, were reported by almost no families in the other two states.

Influence of economic level. All families were classified into three broad economic groups on the basis of criteria developed in each state relating to household equipment and facilities, tenure, education, off-farm employment, and other facts. These groupings represented the relative economic position within the counties studied in each state, but they may not have represented the same levels of living from one state to another. Nevertheless, the influence of economic level on food patterns was similar in the three states.

The economic level was reflected more by the use of fruits and vegetables than by that of other foods. The percentage of breakfasts in the three economic levels containing fruit, fruit juice, or tomato juice shows this:

Economic Level :	Per Cent Having Fruit or Juice at Breakfast:					
	California	:	Nebraska	:	Rhode Island	:
Low. . . . . :	39	:	34	:	19	:
Medium . . . . . :	47	:	52	:	52	:
High . . . . . :	67	:	60	:	81	:



Similarly, the number of families serving green and yellow vegetables two or more times during the six meals represented 60, 76, and 87 per cent of the total, respectively, in the low, medium, and high economic groups. Other differences among these income levels include the more frequent serving of bread, cereals, and potatoes in meals of families in the low economic group.